

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>SAND11827II</b>	<b>FOR FURTHER ACTION</b> <div style="text-align: right; font-size: small;">see Form PCT/ISA/220 as well as, where applicable, item 5 below.</div>	
International application No. <b>PCT/EP2005/051129</b>	International filing date (day/month/year) <b>14/03/2005</b>	(Earliest) Priority Date (day/month/year) <b>12/03/2004</b>
Applicant  <b>SANDVIK AB</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 2

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2005/051129

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B23B51/02 B23C5/10

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B23B B23C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	EP 0 088 505 A (GENERAL ELECTRIC COMPANY) 14 September 1983 (1983-09-14) the whole document	1-5,8 9,10
X	US 6 257 807 B1 (HEINLOTH MARKUS) 10 July 2001 (2001-07-10) the whole document	1,2,4-6, 8,9
X A	GB 2 184 373 A (* KOMET STAHLHALTER-UND WERKZEUGFABRIK ROBERT BREUNING GMBH) 24 June 1987 (1987-06-24) the whole document	1,2 4-6,8
X A	EP 1 075 889 A (HITACHI TOOL ENGINEERING, LTD) 14 February 2001 (2001-02-14) figure 1	1,2 4-8
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☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## ° Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

8 July 2005

Date of mailing of the international search report

27/07/2005

Name and mailing address of the ISA

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Authorized officer

Fanti, P

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP2005/051129

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 6 435 780 B1 (FLYNN CLIFFORD M) 20 August 2002 (2002-08-20) figures 1-3</p> <p>-----</p>	<p>1, 2, 5, 10-17</p>

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2005/051129

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0088505	A	14-09-1983	GB 2116083 A	21-09-1983
			GB 2116081 A	21-09-1983
			GB 2116082 A	21-09-1983
			AT 34685 T	15-06-1988
			CA 1229751 A1	01-12-1987
			DE 3376808 D1	07-07-1988
			EP 0088505 A1	14-09-1983
			US 4558975 A	17-12-1985
			US 4475851 A	09-10-1984
			JP 58181506 A	24-10-1983
			US 4776732 A	11-10-1988
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US 6257807	B1	10-07-2001	WO 9807539 A1	26-02-1998
			DE 19736282 A1	26-02-1998
			DE 59707332 D1	27-06-2002
			EP 0923422 A1	23-06-1999
			ES 2176782 T3	01-12-2002
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GB 2184373	A	24-06-1987	DE 8536123 U1	16-04-1987
			AT 393098 B	12-08-1991
			AT 308686 A	15-01-1991
			CH 671353 A5	31-08-1989
			FR 2591921 A1	26-06-1987
			IT 1213551 B	20-12-1989
			JP 2504976 B2	05-06-1996
			JP 62157707 A	13-07-1987
			SE 465409 B	09-09-1991
			SE 8605407 A	22-06-1987
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EP 1075889	A	14-02-2001	JP 3317490 B2	26-08-2002
			JP 2000005921 A	11-01-2000
			US 6413023 B1	02-07-2002
			EP 1075889 A1	14-02-2001
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US 6435780	B1	20-08-2002	CA 2384124 A1	17-01-2002
			EP 1299208 A1	09-04-2003
			WO 0204159 A1	17-01-2002
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# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

## PCT

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/EP2005/051129

International filing date (day/month/year)  
14.03.2005

Priority date (day/month/year)  
12.03.2004

International Patent Classification (IPC) or both national classification and IPC  
B23B51/02, B23C5/10

Applicant  
SANDVIK AB

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/EP2005/051129

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**Box No. I Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material:  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/EP2005/051129

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**Box No. V Reasoned statement under Rule 43bis.1(a)(I) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-6,8
Inventive step (IS)	Yes: Claims	
	No: Claims	1-19
Industrial applicability (IA)	Yes: Claims	1-19
	No: Claims	

2. Citations and explanations

**see separate sheet**



The document EP-A-0088505 (D1), which is considered the nearest prior art document in relation to the present application, discloses all the features described in claim 1.

Therefore claim 1 lacks novelty and does not satisfy the requirements of Art. 33(2) in connection with Rule 64.1 PCT.

The same applies to the subject matter of the claims 2-5 and 8.

The subject matter of the independent method claims 18 and 19 is not explicitly disclosed in any of the cited documents. The measures therein disclosed however derive from simple static equilibrium relationships that the skilled man would certainly consider in order to achieve a more stable operation of the cutting tool. It does not appear therefore that the subject matter of said claims can be related to the presence of an inventive activity.

Although the subject matter of the remaining independent claims is to a large extent not known from the cited prior art documents, it does not appear that the features therein described are bringing about any surprising or unexpected effect; they appear rather as being measures belonging to the general knowledge of the skilled man that can be adopted in the specific case without implying any inventive activity.

It is not at present apparent which part of the application could serve as a basis for a new, allowable claim. Should the applicant nevertheless regard some particular matter as patentable an independent claim(s) including such particular matter should be filed taking account of Rule 6.3 PCT. The applicant should also indicate in the letter of reply the difference vis à vis the state of the art and the significance thereof.

Any new independent claim should be properly delimited vis-a-vis the prior art disclosed in the nearest single cited document. The first prior art portion should include those features of the invention which are known from such document. Dependent claims should be adapted thereto.

The description should be amended to meet the requirements of Rule 5.1 PCT. In particular, the nearest prior art document should be acknowledged as the state of the art disclosing the features of the first part of claim 1 and the invention fully evaluated in its



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

International application No.

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light, whereby the inherent problem and its solution should be reformulated if necessary, and a reasoned statement be submitted as to why the subject matter of the new independent claim should be regarded as inventive over the cited prior art.

The attention of the applicant is drawn to the fact that the application may not be amended in such a way that it contains subject-matter which extends beyond the content of the application as filed, Article 28 PCT.